## (19) World Intellectual Property Organization International Bureau





## (43) International Publication Date 27 February 2003 (27.02.2003)

## **PCT**

## (10) International Publication Number WO 03/016901 A1

(51) International Patent Classification7: G01N 33/50

(21) International Application Number: PCT/KR02/01544

(22) International Filing Date: 13 August 2002 (13.08.2002)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 2001-49033 14 August 2001 (14.08.2001)

(71) Applicant for all designated States except US): SAM-SUNG ELECTRONICS CO., LTD. [KR/KR]; 416 Maetan-dong, Paldal-gu, Suwon-city, 442-373 Kyungki-do (KR).

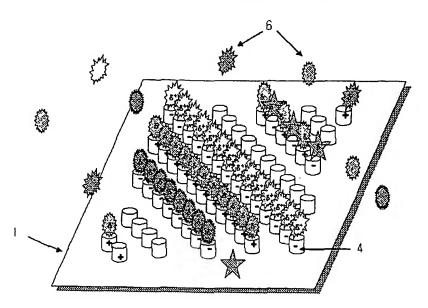
(72) Inventors; and

(75) Inventors/Applicants (for US only): KANG, Seong-Ho [KR/KR]; 108-303 Dongwon Apt., 1878-5, Jeongwang-dong, Siheung-si, 429-450 Gyeonggi-do (KR). PAK, Yukeun Eugene [US/KR]; 408-606 Hyundai Apt., 92, Scohycon-dong, Bundang-gu, Scongnam-si, 463-050 Gyeonggi-do (KR). CHOI, Won-Bong [KR/KR]; 103-1004 Gugal 2-jigu Poonglim Apt., 166 Gugal-ri, Kiheung-eub, Yongin-si, 449-900 Gyeonggi-do (KR).

- (74) Agent: LEE, Young-Pil; The Cheonghwa Building, 1571-18, Seocho-dong, Seocho-gu, 137-874 Seoul (KR).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: SENSOR FOR DETECTING BIOMOLECULE USING CARBON NANOTUBES



(57) Abstract: The present invention provides a sensor for detecting a biomolecule, particularly a sensor for detecting a biomolecule comprising (a) a substrate; and (b) a plurality of carbon nanotubes which are arranged on the substrate and provide a binding site for a receptor for a target biomolecule. According to the present invention, a various kinds of disease-associated biomolecules can be detected simultaneously, accurately and quickly.

03/016901 A1